

# Pairing correlations in superheavy nuclei

Z. Patyk<sup>1</sup>

<sup>1</sup>Soltan Institute for Nuclear Studies, Poland

zygmunt.patyk@fuw.edu.pl

In theoretical description of atomic nucleus very important role plays pairing correlations. Direct mass measurements of nuclei carried out at GSI-Darmstadt [1] opens a new possibility to predict the pairing force at the region of heavy and superheavy nuclei. We have tested, in the macroscopic-microscopic approach [2], a sensitivity of the theoretical description of properties of superheavy nuclei as a function of the strength of pairing forces. Basic properties for superheavy nuclei as odd-even nuclear mass staggering, a height of fission barrier,  $Q_\alpha$  and a neutron separation energy are discussed. Recently superheavy nuclei are intensively investigated in many laboratories [eg. 3,4].

## References

- [1] Yu.A. Litvinov *et al.*, to be published; T. Radon et al. Nucl. Phys. **A677**, 75 (2000).
- [2] Z. Patyk and A. Sobiczewski, Nucl. Phys. **A533**, 132 (1991).
- [3] S. Hofmann and G. Münzenberg, Rev. Mod. Phys. **72**, 733 (2000).
- [4] Yu.Ts. Oganessian, Yad. Fiz. 63, 1391 (2000); Phys. At. Nucl. **63**, 1315 (2000).